Patented Oct. 23, 1928. 1,688,996

UNITED STATES PATENT OFFICE.

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CONCEALED HINGE.

Application filed March 1, 1926. Serial No. 91,400.

This invention relates to concealed hinges and particularly to hinges of this class employing two substantially similar sheet metal butt members, coupled together by one or more link members, and particularly to hinge butts of this class adapted to be mounted in cylindrical or substantially cylindrical apertures in the stationary support and swinging member, respectively; and the object of the invention is to construct the hinge butts from a sheet metal blank fashioned to form a channel portion which traverses the bore or aperture in which the butt is mounted, and to provide at the outer end of said channel body, laterally extending flanges fashioned to form closures for the apertures or sockets in which the butts are mounted; a further object being to provide a hinge butt of the class described, which by virtue of the constuction employed, may be manufactured at a nominal cost and yet provide a strong and durable hinge butt construction, an especially in the construction of small hinges such as used in cabinet work; a still further object being to provide means for reinforcing the butt and to provide channels therein for guiding the movable link or link members employed; and with these and other objects in view, the invention consists in a hinge butt of the class and for the purpose specified which is simple in construction, efficient in use, and which is constructed as hereinafter described and claimed.

The invention described and claimed herein is an improvement on that shown and described in a prior application filed by me November 27, 1925, and bearing Serial No. 71,539, and is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is an edge view of a stationary support and swinging member showing my improved hinge mounted in connection therewith.

Fig. 2 is a partial section on the line 2—2 of Fig. 1.

Fig. 3 is a plan view of a blank from which the hinge butt shown in Figs. 1 and 2 is formed.

Fig. 4 is a partial section on the line 4—4 of Fig. 1.

Fig. 5 is a partial section on the line 5—5 of Fig. 2; and,

Fig. 6 is a view similar to Fig. 5 but showing a modified form of construction.

In the drawing, I have shown at 10 and 11, a stationary support and swinging member, the edge of each of which is provided with an aperture or socket 12 for receiving the separate butts of my improved hinge 13. In the construction shown in Figs. 1 to 5 inclusive, each of the butts is fashioned from a sheet metal blank 14 shown in Fig. 3 of the drawing, one side edge of the blank being cut out to form a recess 15, to form at the opposite sides of said recess, arc-shaped portions 16 foldable on the lines 17 at right angles to the longitudinal plane of the sheet. The blank 14 is also folded on the lines 18 to bring the side portions 19 and 20 thereof into parallel relation to form of the blank, a U-shaped or channel butt body, the crosshead 21 of which is arc-shaped in form to fit the curvature of the walls of the recesses or aperture 12, as clearly seen in Fig. 5 of the drawing. The crosshead is preferably offset at one point as seen at 22 to form a reinforcing and strengthening rib or corrugation. The side members 19 and 20 are provided on their inner and adjacent faces with arc-shaped grooves 23 formed by pressing the metal outwardly in U or channel fashion as seen at 24 in Fig. 5 of the drawing. The outwardly pressed channel portions 24 also form ribs which aid in strengthening or reinforcing the side members or bearing plates 19 and 20 of the separate butts of the hinge. The grooves 23 open through the inner or lower ends of the butts as clearly seen in Figs. 2 and 3 of the drawing to facilitate the mounting of pins 25 in said grooves. The pins 25 are mounted upon and carried by the free end portions of links 26 substantially V-shaped in form, said links being pivoted together as seen at 27. The short arms of said links are pivotally mounted within and to the separate butts on pivot pins 28 passing through apertures 29 formed in the side portions 19 and 20, as clearly seen in Fig. 3 of the drawing.

It will be noted that the separate links 26